

TFW 2824



PATENT APPLICATION  
Docket: 14321.78

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: )  
)  
Toshikazu Hashimoto et al. )  
) Art Unit  
Serial No.: 10/540,734 ) 2874  
)  
Filed: January 23, 2006 )  
)  
Confirmation No.: 9162 )  
)  
For: WAVE TRANSMISSION MEDIUM AND )  
WAVEGUIDE CIRCUIT )

CERTIFICATE OF DEPOSIT UNDER 37 C.F.R. § 1.8

I hereby certify that the following documents are being deposited with the United States Postal Service as First Class Mail, postage prepaid, in an envelope addressed to: Commissioner for Patents, PO Box 1450, Alexandria, Virginia 22313-1450, on the 2<sup>nd</sup> day of May 2006.

- Transmittal for Information Disclosure Statement (3 pages)
- Information Disclosure Statement (2 pages)
- Form PTO-1449 listing 10 references (2 pages)
- A copy of each of the references listed on the Form PTO-1449
- Postcard

Respectfully submitted,

DANA L. TANGREN  
Attorney for Applicant  
Registration No. 37,246  
Customer No. 022913  
Telephone No. 801.533.9800



WON

VERNON R. RICE §  
OF COUNSEL



INTELLECTUAL PROPERTY ATTORNEYS

Docket: 14321.78

In re application of:

Toshikazu Hashimoto et al.

Serial No.: 10/540,734

Filed: January 23, 2006

Confirmation No.: 9162

For: WAVE TRANSMISSION MEDIUM AND  
WAVEGUIDE CIRCUIT

## TRANSMITTAL FOR INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

Transmitted herewith for filing and pursuant to 37 C.F.R. § 1.97 is an Information Disclosure Statement, which includes the following statements, if any, required variously by 37 C.F.R. § 1.98:

— Statement of relevance of selected cited references not in the English language which are not translated.

— Statement that selected cited references are substantially cumulative of an enclosed or previously submitted reference.

Statement that selected cited references were previously cited by or submitted to the United States Patent and Trademark Office in a prior application which is relied upon for an earlier filing date under 35 U.S.C. § 120.

A. Additional Materials Required Due to Content of Information Disclosure Statement

Transmitted are the following documents in addition to the Information Disclosure Statement as required variously under 37 C.F.R. § 1.98:

- ☒ Form PTO-1449 listing 10 references submitted for consideration.
- ☒ A copy of all of the references listed on the Form PTO-1449.
- ☐ English translations of \_\_\_ (\_\_\_) of the references listed on the Form PTO-1449 which are not in the English language.
- ☐ Copies of the following documents from the prosecution of a previous, related application:
  - ☐ Form PTO-1449 AND INFORMATION DISCLOSURE STATEMENT; and
  - ☐ Form PTO-892

B. Additional Materials Required Due to Timing of Filing of Information Disclosure Statement

The transmitted Information Disclosure Statement is being filed within one (1) of the following four (4) time periods:

- I. ☒ Prior to the later of either three (3) months following the filing date or the mailing of a first Office Action. Accordingly, no materials other than those listed above are enclosed.
- II. ☐ Following the latter of either three (3) months following the filing date or the mailing of a first Office Action, but before the mailing of a final Office Action or a Notice of Allowance. Accordingly, to secure consideration thereof, one (1) of the following is also enclosed:
  - ☐ Promptness Certification; or
  - ☐ Check No. \_\_\_\_\_ in the amount of \_\_\_ constituting the submission fee set forth in 37 C.F.R. § 1.17(p).
- III. ☐ After the mailing of a Notice of Allowance, but before payment of the Issue Fee. Accordingly, in order to secure consideration thereof, each of the following are also enclosed:
  - ☐ Promptness Certificate;
  - ☐ Petition for Consideration; and

- \_\_\_ Check No. in the amount of \_\_\_ constituting the petition fee set forth in 37 C.F.R. § 1.17(i)(1).
- IV. \_\_\_ After payment of the Issue Fee. Accordingly, in order to secure consideration thereof, each of the following are also enclosed:
- \_\_\_ Petition to Withdraw from Issue; and
- \_\_\_ Check No. \_\_\_ in the amount of \_\_\_ constituting the petition fee set forth in 37 C.F.R. § 1.17(i)(1).

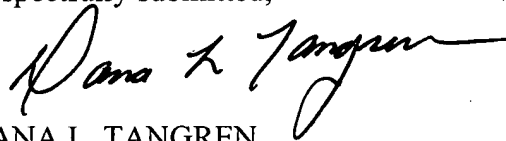
C. Fees

The Commissioner is hereby authorized to charge payment of or any deficiency in the following fees associated with this communication, or to credit any overpayment thereof, to Deposit Account No. 23-3178. A duplicate copy of this letter is enclosed.

- X Any fee required in relation to filing of this letter or any documents transmitted therewith.
- \_\_\_ The submission fee set forth in 37 C.F.R. § 1.17(p) in the event that 37 C.F.R. § 1.97(c) applies and the Examiner is not satisfied that any Promptness Certificate submitted meets the requirements of 37 C.F.R. § 1.97(e).
- \_\_\_ The submission fee set forth in 37 C.F.R. § 1.17(p).
- \_\_\_ The petition fee set forth in 37 C.F.R. § 1.17(i)(1).

Dated this 2<sup>nd</sup> day of May 2006.

Respectfully submitted,



DANA L. TANGREN  
Attorney for Applicant  
Registration No. 37,246  
Customer No. 022913  
Telephone No. 801.533.9800



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INFORMATION DISCLOSURE STATEMENT  
UNDER 37 C.F.R. § 1.97

Commissioner for Patents  
PO Box 1450  
Alexandria, Virginia 22313-1450

Sir:

Please find, pursuant to 37 C.F.R. § 1.98(a)(1), the enclosed Form PTO-1449 which contains a list of all patents, publications, or other items that have come to the attention of one or more of the individuals designated in 37 C.F.R. § 1.56(c). While no representation is made that these references may be "prior art" within the meaning of that term under 35 U.S.C. §§ 102 or 103, the enclosed listed references are disclosed so as to fully comply with the duty of disclosure set forth in 37 C.F.R. § 1.56.

Moreover, while no representation is made that a specific search of office files or patent office records has been conducted or that no better art exists, the undersigned attorney of record believes that the enclosed art is the closest to the claimed invention (taken in its entirety) of which the undersigned is presently aware, and no art which is closer to the claimed invention (taken in its entirety) has been knowingly withheld.

In accordance with 37 C.F.R. §§ 1.97 and 1.98, a copy of each of the listed references or relevant portion thereof that is not a US patent document is also enclosed.

Statement of Relevance of References Listed  
Unaccompanied by English Translation  
Under 37 CFR § 1.98(a)(3)

In accordance with 37 CFR § 1.98(a)(3), the following concise explanation of the relevance of each listed reference that is not in the English language and unaccompanied by a translation into English is provided.

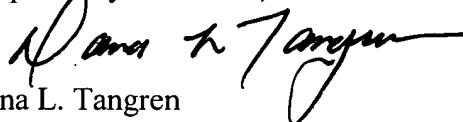
Japanese Application No. 53-100848: PURPOSE: To make the optical transmission parts for an photochemical modulator small and highly sensitive by using a medium layer which is prepared by mixing fine crystalline powders of a photochemical material into a filler.

Japanese Application No. 10-186184: PROBLEM TO BE SOLVED: To provide an optical bus in which the high speed of an optical transmission is attained and a signal processor adopting the bus. SOLUTION: Plural signal light input and output parts 33 to carry out incidences or the emittings of signal lights are provided at end faces of data buses of an optical transmission layer 31 and optical scattering bodies 34 whose material are made of polystyrene which diffuse signal lights made incident on them from the signal light input and output parts 33 into the whole of the light transmission layer 31 are made to be scattered in the inside of the layer 31. Moreover, a light absorbing layer 35 made of carbonaceous black inorganic pigment which absorb signal lights heading the inside of the optical transmission layer 31 to the end faces of the optical transmission layer 31 is formed so as to be along parts other than the signal light input and output parts 33 of the optical transmission layer 31.

Article entitled *Design Simulation of Silica-Based Planar Lightwave Circuits*: Silica-based planar lightwave circuits (PLCs) tend to become key component parts for lightwave network construction because of their features such as a high degree of freedom in design, a low loss characteristic, matching with an optical fiber, and high reliability. With diversification and functionally upgrading of silica-based PLCs, a circuit design by simulation becomes important. Further, the silica-based PLCs having clear waveguide shape also has characteristics for which a numeric analysis result and a test result are well coincident with each other. In this paper, we describe a simulation design in silica-based PLC research and development while introducing an example of specific application in PLCs.

Dated this 2<sup>nd</sup> day of May 2006.

Respectfully submitted,



Dana L. Tangren

Attorney for Applicant

Registration No. 37,246

Customer No. 022913

Telephone No. 801.533.9800

Applicant: Toshikazu Hasimoto et al.

Confirmation No.: 9162

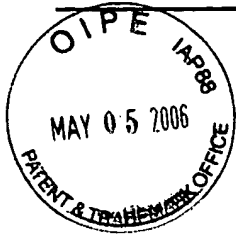
Serial No.: 10/540,734

Att'y Docket No.: 14321.78

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Art Unit: 2874

For: WAVE TRANSMISSION MEDIUM AND WAVEGUIDE CIRCUIT

INFORMATION DISCLOSURE CITATIONS MADE BY APPLICANTU.S. Patent Documents

<u>Examiner</u> <u>Initial*</u>	<u>Document</u> <u>Number</u>	<u>Issue</u> <u>Date</u>	<u>Name</u>
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Foreign Patent Documents

<u>Examiner</u> <u>Initial*</u>	<u>Document</u> <u>Number</u>	<u>Publication</u> <u>Date</u>	<u>Country or</u> <u>Patent Office</u>	<u>Translation</u>
_____ 1	53-100848	09/02/1978	Japan	No
_____ 2	10-186184	07/14/1998	Japan	No

Other Documents

(including author, title, pertinent pages, etc.)

Examiner  
Initial\*

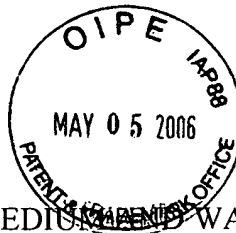
_____ 3	Yoshinori Hibino, <i>Passive Optical Devices for Photonic Networks</i> , IEICE Trans. Commun., Vol. E83-B, No. 10, October 2000, pp. 2178-2190.
_____ 4	T.W. Mossberg, <i>Planar Holographic Optical Processing Devices</i> , Optics Letters, Vol. 26, No. 7, April 1, 2001, pp. 414-416.
_____ 5	K. Okamoto, <i>Fundamentals of Optical Waveguides</i> , Chapter 9, Planar Lightwave Circuits, Academic Press, 2000, pp. 346-379.
_____ 6	K. Okamoto et al., <i>Flat Spectral Response Arrayed-Waveguide Grating Multiplexer with Parabolic Waveguide Horns</i> , Electronic Letters, Vol. 32, No. 18, August 29, 1996, pp. 1661-1662.

Examiner:

Date Considered:

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609, draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Applicant: Toshikazu Hasimoto et al.  
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Sheet 2 of 2  
Confirmation No.: 9162  
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- \_\_\_\_ 7 Hongling Rao et al., *A Bidirectional Beam Propagation Method of Multiple Dielectric Interfaces*, IEEE Photonics Technology Letters, Vol. 11, No. 7, July 1999, pp. 830-832.
- \_\_\_\_ 8 Toshihiko Baba et al., *Dispersion and Radiation Loss Characteristics of Antiresonant Reflecting Optical Waveguides-Numerical Results and Analytical Expressions*, IEEE Journal of Quantum Electronics, Vol. 28, No. 7, July 1992, pp. 1689-1700.
- \_\_\_\_ 9 Charls Kettel ed., *Introduction to Solid State Physics 6<sup>th</sup>*, Chapter 2, John Wily & Sons, Inc., New York, 1986, pp. 30-37.
- \_\_\_\_ 10 Senichi Suzuki, *Design Simulation of Silica-Based Planar Lightwave Circuits*, 1999 Transactions of the Institute of Electronic and Information Communication Engineers (IEICE), Electronics 1, March 8, 1999, pp. 510-511.

### References Cited by Applicants

While the filing of Information Disclosure Statements is voluntary, the procedure is governed by the guidelines of Section 609 of the Manual of Patent Examining Procedure and 37 C.F.R. §§ 1.97 and 1.98. To be considered a proper Information Disclosure Statement, Form PTO-1449 shall be accompanied by a copy of each listed patent or publication or other item of information and a translation of the pertinent portions of foreign documents (if an existing translation is readily available to the applicant), an explanation of relevance of each reference not in the English language, and should be submitted in a timely manner as set out in MPEP Sec. 609.

Examiners will consider all citations submitted in conformance with 37 C.F.R. § 1.98 and MPEP Sec. 609 and place their initials adjacent the citations in the spaces provided on this form. Examiners will also initial citations not in conformance with the guidelines which may have been considered. A reference may be considered by the Examiner for any reason whether or not the citation is in full conformance with the guidelines. A line will be drawn through a citation if it is not in conformance with the guidelines AND has not been considered. A copy of the submitted form, as reviewed by the Examiner, will be returned to the applicant with the next communication. The original of the form will be entered into the application file.

Each citation initialed by the Examiner will be printed on the issued patent in the same manner as references cited by the Examiner on Form PTO-892.

The reference designations "A1," "A2," etc. (referring to Applicant's reference 1, Applicant's reference 2, etc.) will be used by the Examiner in the same manner as Examiner's reference designations "A," "B," "C," etc. on Office Action Form PTO-1142.

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Examiner:

Date Considered:

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609, draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.